Atty Docket No.: 251475US3DIV Inventors: Kousaku MATSUNO, et al.

Preliminary Amendment

IN THE SPECIFICATION

On page 1, at line 2, please insert the following text:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application is a divisional of U.S. application serial number 09/742,423 filed December 22, 2000, and further is based upon and claims the benefit of priority from the prior Japanese Patent Application No. 367923/1999, filed December 24, 1999, and the prior Japanese Patent Application No. 307029/2000, filed October 6, 2000, the entire contents of each of which are hereby incorporated herein by reference.

Please amend the paragraph at page 2, line 23 to, page 3, line 14, as follows:

As illustrative conventional techniques for such treatment of substrates, JP 10-298585 A JP 10-298589 A discloses a process in which subsequent to plasma ashing of a resist, organic matter and the like on a substrate are removed using ozone water with a basic fluoride added therein. A process is proposed in JP 9-255998 A, in which ultraviolet rays are irradiated in the presence of ozone gas to remove fine organic particles which are remaining on a substrate. JP 10-41262 A discloses to use carbonated water or hydrogen water, which has been prepared by dissolving hydrogen gas in ultrapure water, for the removal of fine metal particles while minimizing corrosion of a pattern such as metallization[[.]], i.e., a deposited film pattern of a conductor material. Further, it is proposed in JP 10-128253 A to clean and rinse a substrate under exposure to supersonic waves in hydrogen water which has been prepared by dissolving hydrogen gas to a concentration of 0.05 ppm or higher in ultrapure water.

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Please amend the paragraph at page 3, line 15 to, page 4, line 17, as follows:

The cleaning with ozone water subsequent to ashing as disclosed in JP 10 298585 A JP 10-298589 A involves a potential problem in that a substrate may be damaged as the plasma ashing is performed with high energy, and the cleaning treatment with the ozone water is accompanied by a further potential problem in that the damage may be deteriorated. In addition, surface roughening may also occur by a cause other than the plasma ashing, and the cleaning with the ozone water has a potential problem in that damage may be spread from such surface roughening. The process disclosed in JP 9-255998 A, in which ultraviolet rays are irradiated in the presence of ozone, is intended for fine organic particles, and cannot be applied for stripping a resist. The cleaning with ozone water, which is disclosed in JP 10-41262 A, is intended to remove fine metal particles, and the effect of the ozone water depends upon the concentration of ozone contained in the ozone water. The concentration of ozone in conventional ozone water, which is available at room temperature under the surrounding atmospheric pressure, is its saturated concentration at the maximum, and therefore, this cleaning process is not considered to be effective for the removal of organic matter still remaining after dry ashing of a resist. Further, the process disclosed in JP 10-128253 A, in which a substrate is soaked in hydrogen water prepared by dissolving hydrogen gas to a concentration of 0.05 ppm or higher in ultrapure water and is exposed to ultrasonic waves, relates to rinsing treatment, and this patent publication makes no mention about the removal of a residue of a resist after dry ashing of the resist.